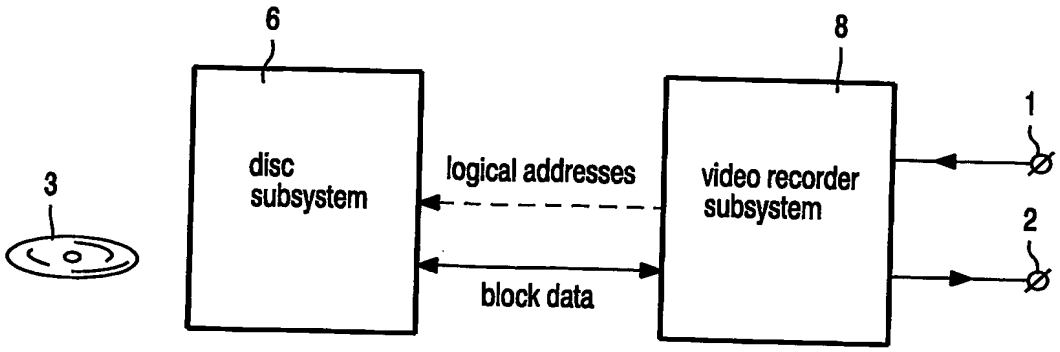


FIG. 1

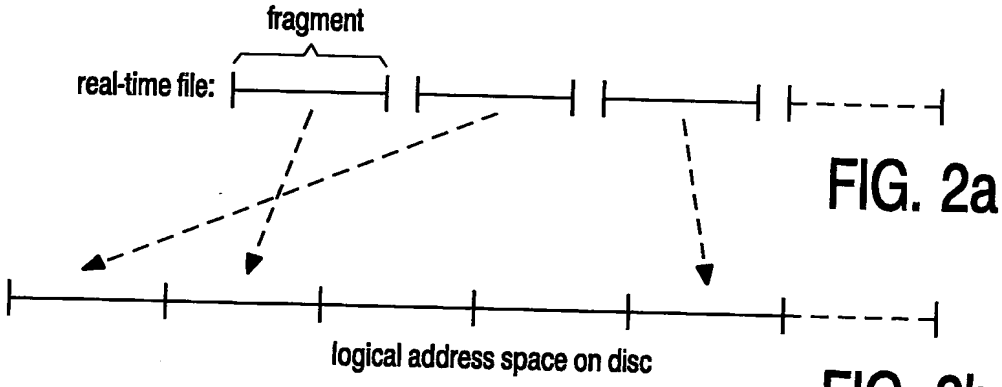


FIG. 2a

FIG. 2b

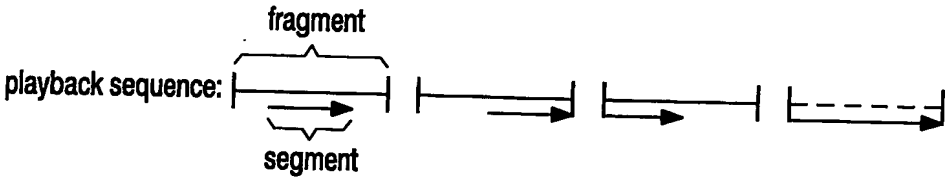


FIG. 3

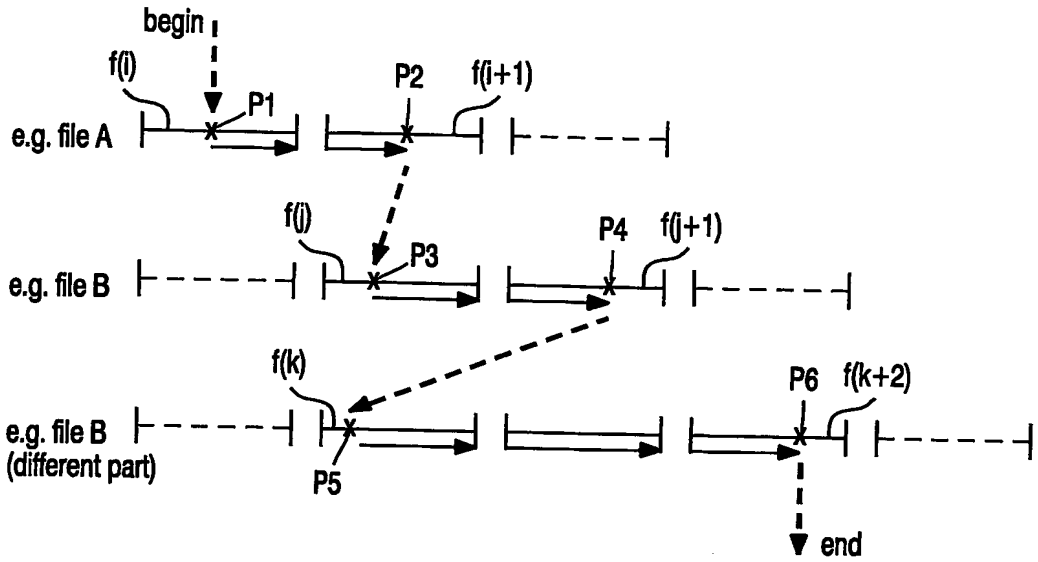

begin
f(i)
P1
P2
f(i+1)
e.g. file A
f(j)
P3
P4
f(j+1)
e.g. file B
f(k)
P6
f(k+2)
e.g. file B
(different part)
P5
end

FIG. 4

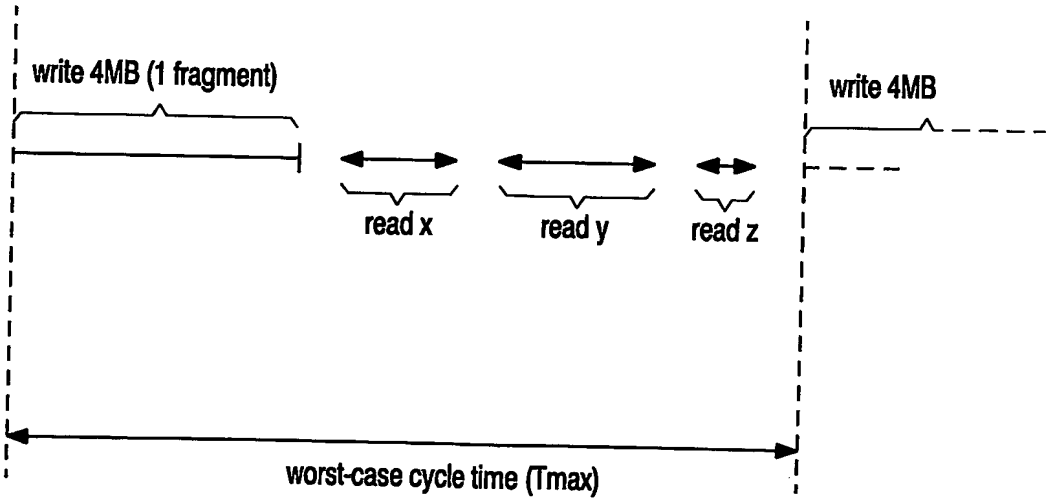

write 4MB (1 fragment)
write 4MB
read x
read y
read z
worst-case cycle time (Tmax)

FIG. 5

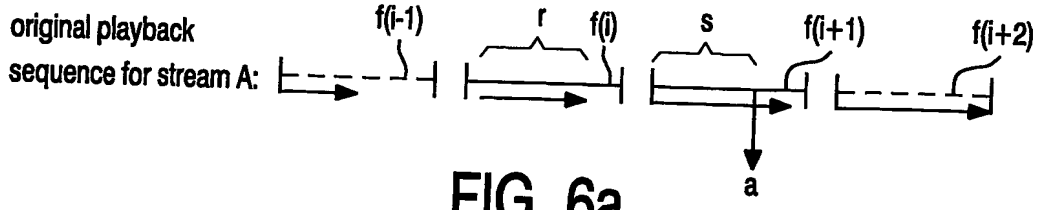


FIG. 6a

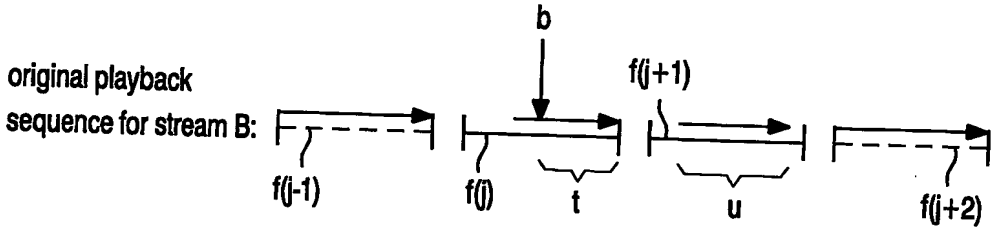


FIG. 6b

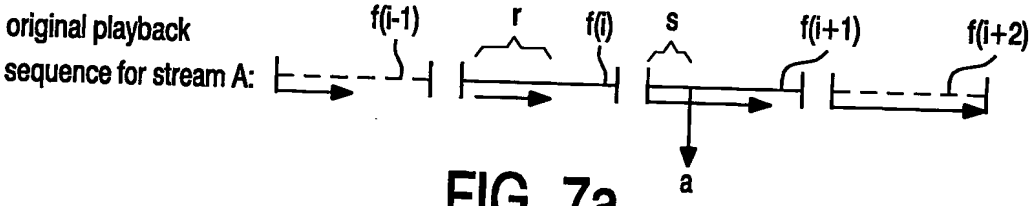


FIG. 7a

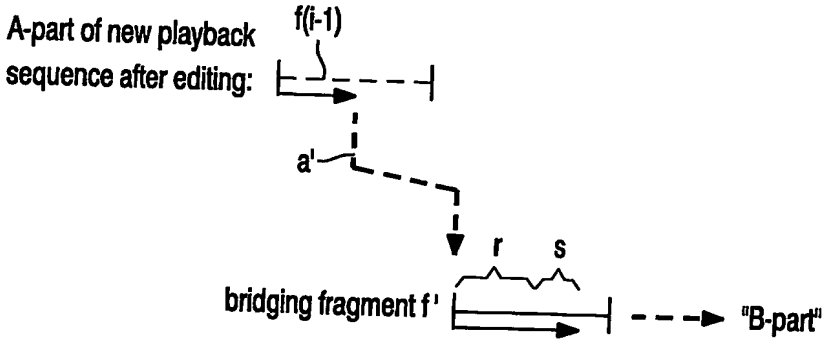


FIG. 7b

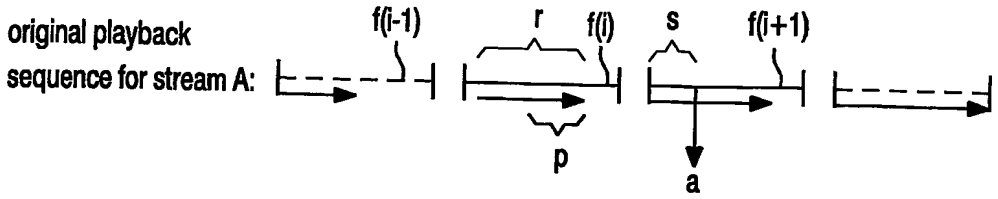


FIG. 8a

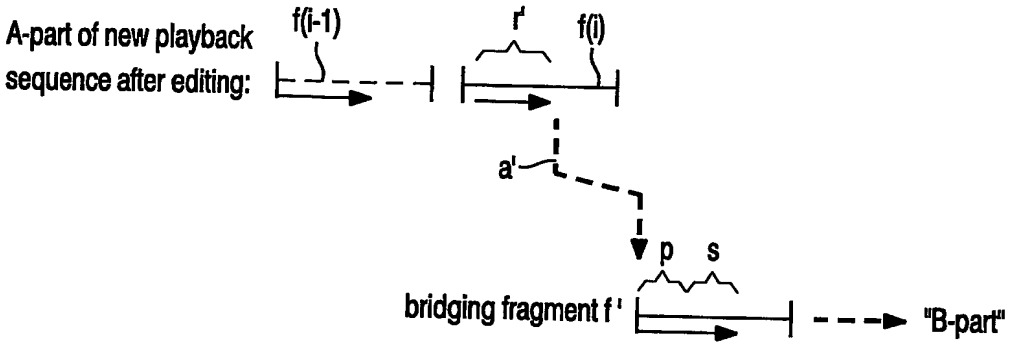


FIG. 8b

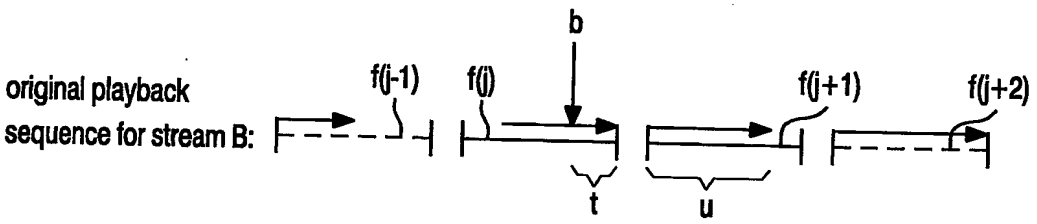


FIG. 9a

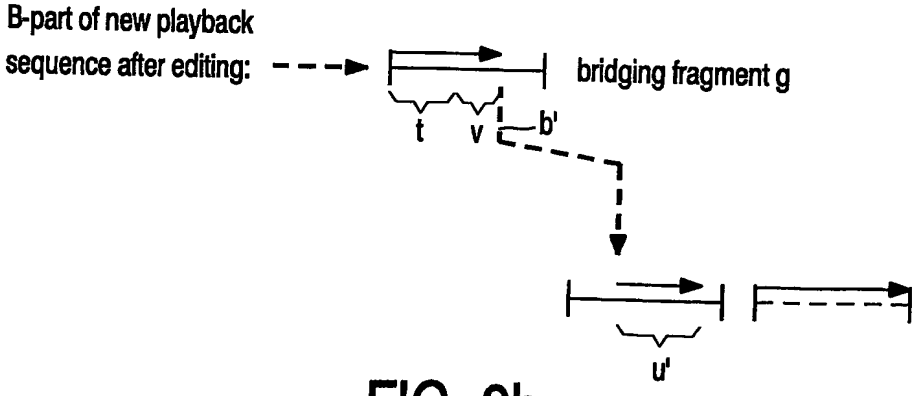


FIG. 9b

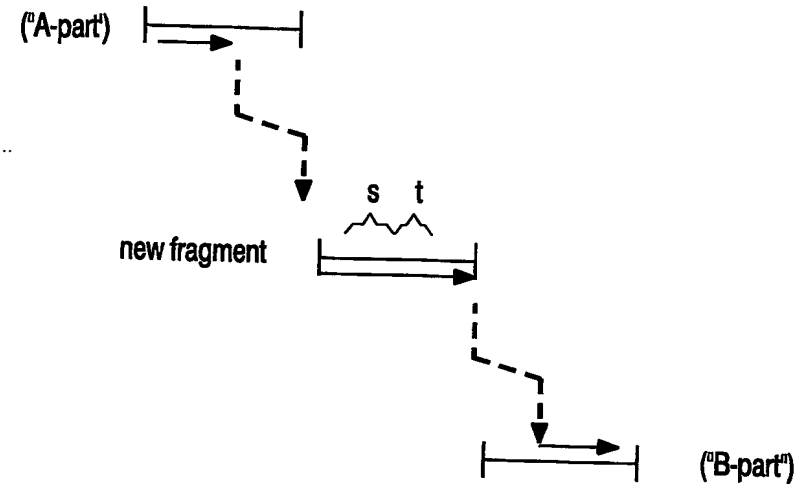

("A-part")
s t
new fragment
("B-part")

FIG. 10

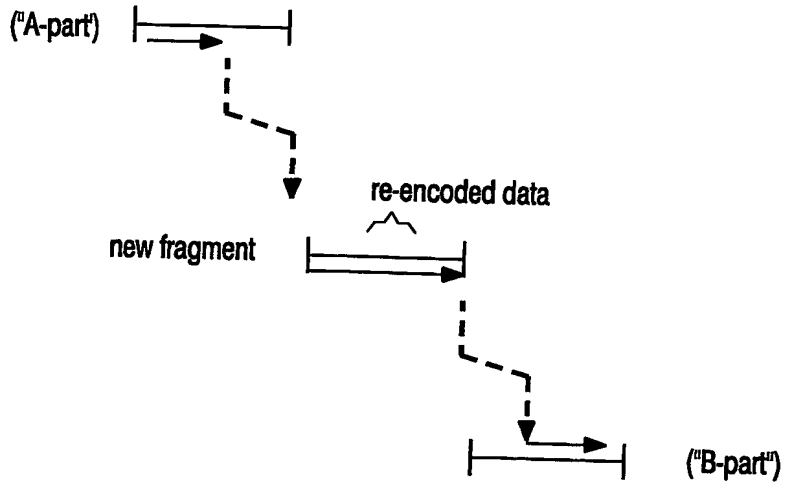

("A-part")
re-encoded data
new fragment
("B-part")

FIG. 11

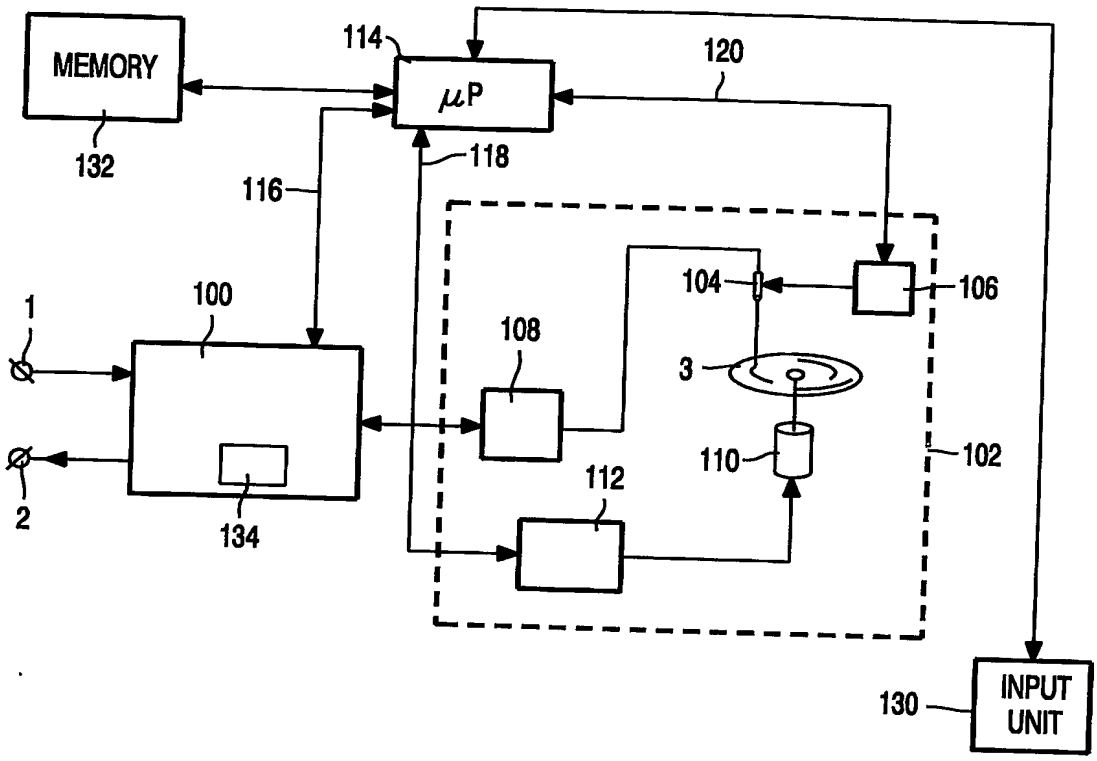

MEMORY
132
114
μP
120
118
116
1
100
2
134
108
104
106
3
110
102
112
130
INPUT UNIT

FIG. 12

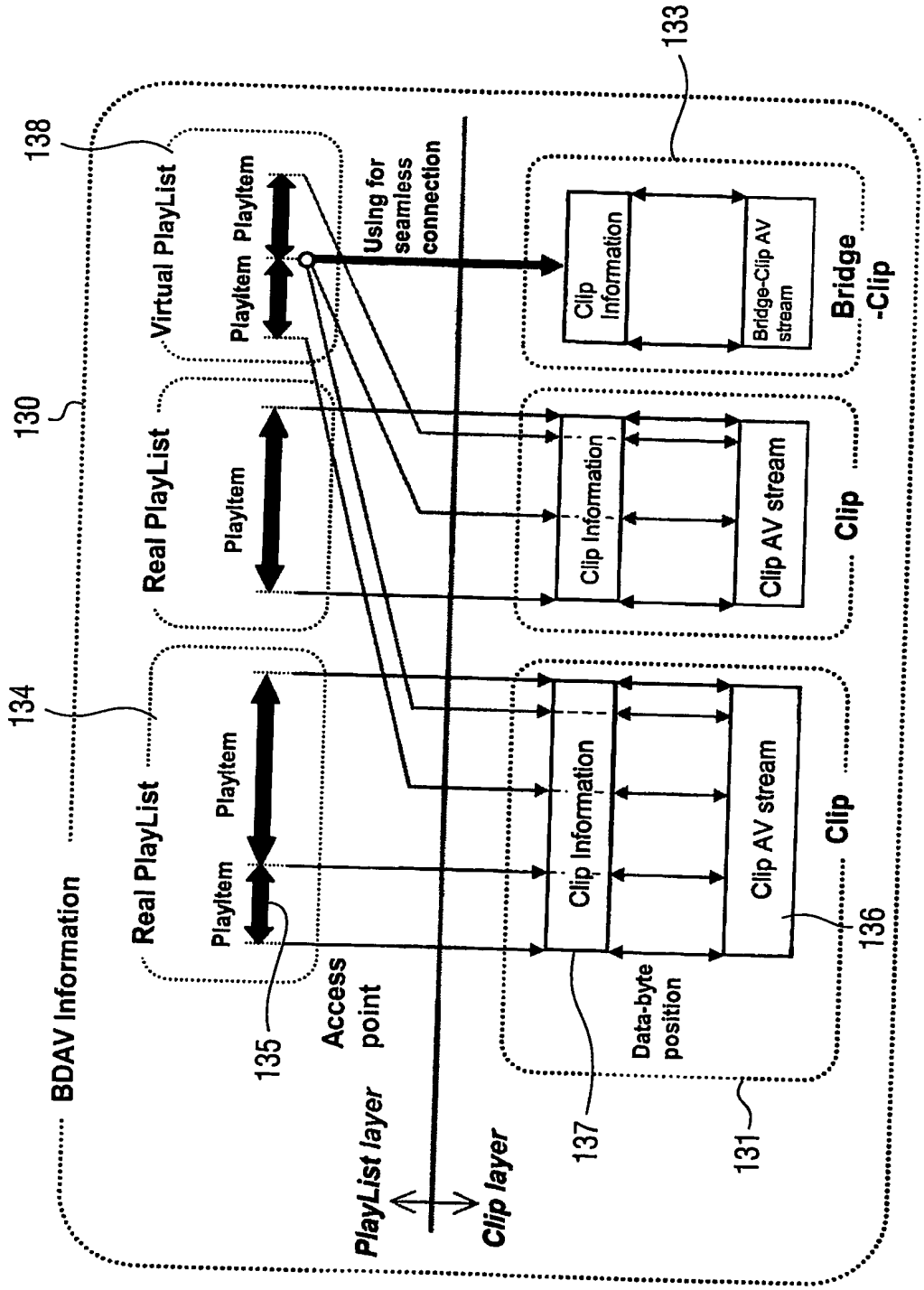

BDAV Information
138
Virtual PlayList
PlayItem
PlayItem
Using for seamless connection
133
Clip Information
Bridge-Clip AV stream
Bridge -Clip
130
Real PlayList
PlayItem
Clip Information
Clip AV stream
Clip
134
Real PlayList
PlayItem
PlayItem
Clip Information
Clip AV stream
Clip
136
135
Access point
Data-byte position
137
131
PlayList layer
Clip layer

FIG.13

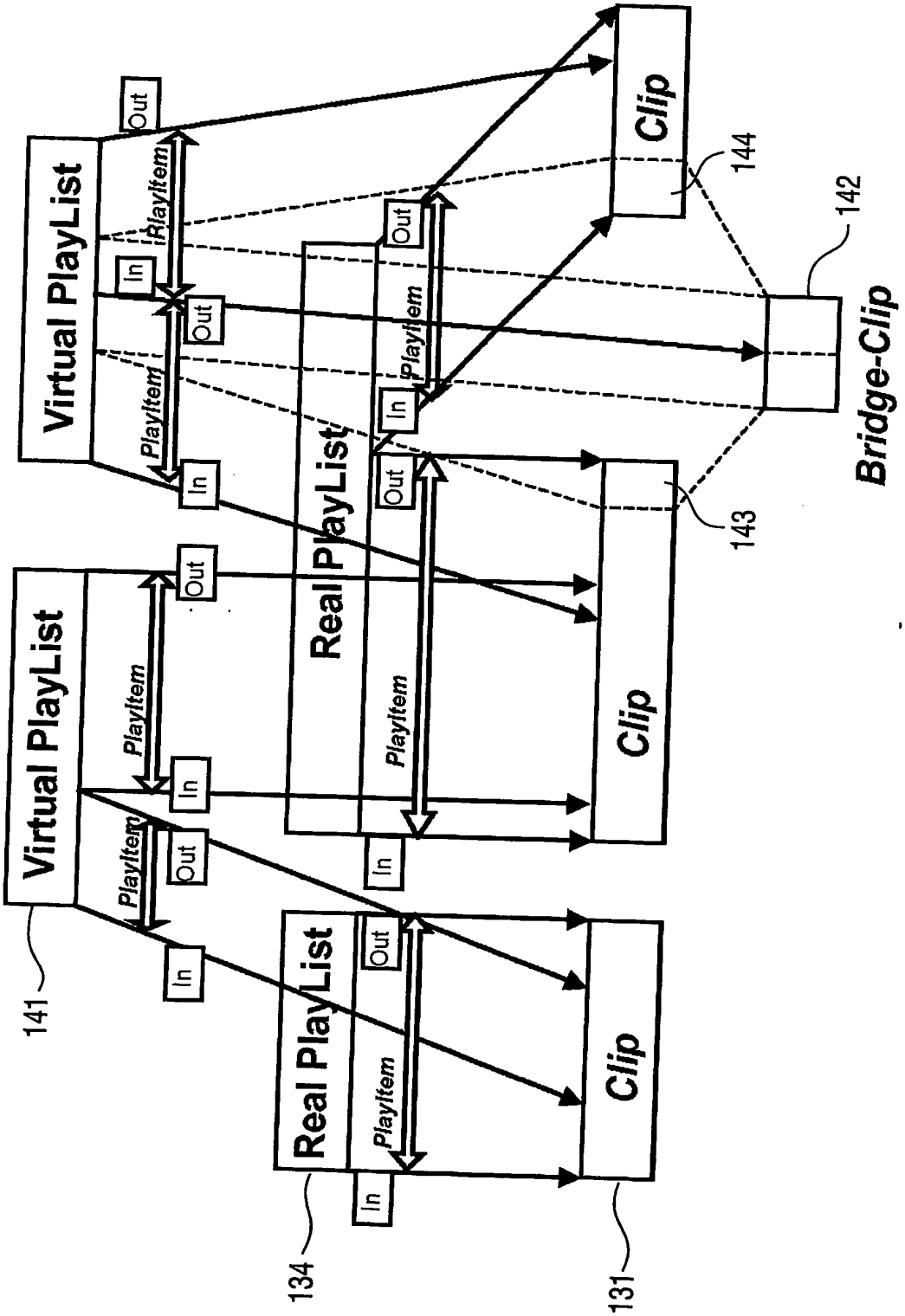

Virtual PlayList
Real PlayList
Clip
Bridge-Clip
PlayItem
In
Out
141
134
131
142
143
144

FIG.14

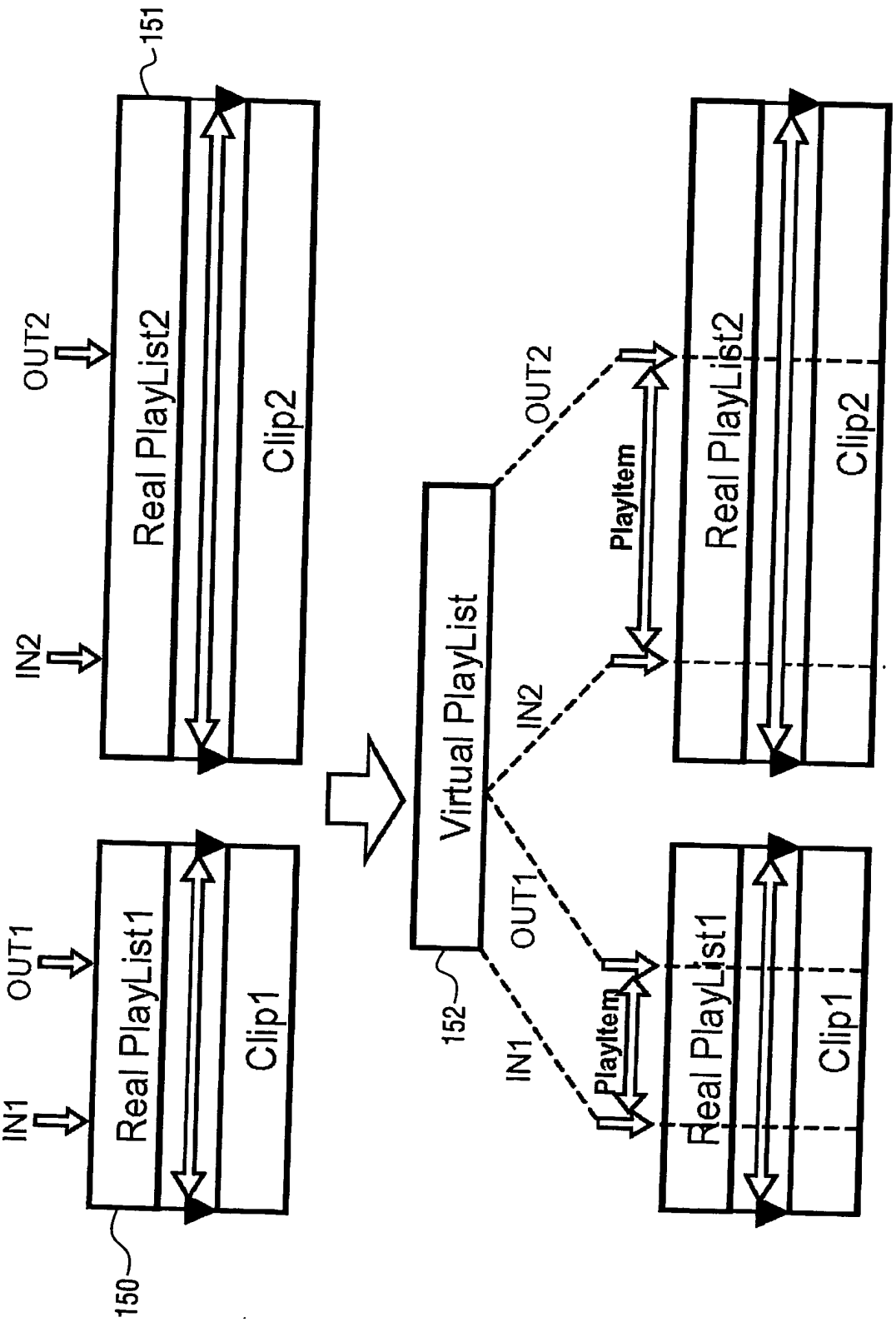

151
OUT2
IN2
Real PlayList2
Clip2
OUT1
IN1
Real PlayList1
Clip1
150
Virtual PlayList
152
OUT2
IN2
OUT1
IN1
PlayItem
PlayItem
Real PlayList2
Clip2
Real PlayList1
Clip1

FIG.15

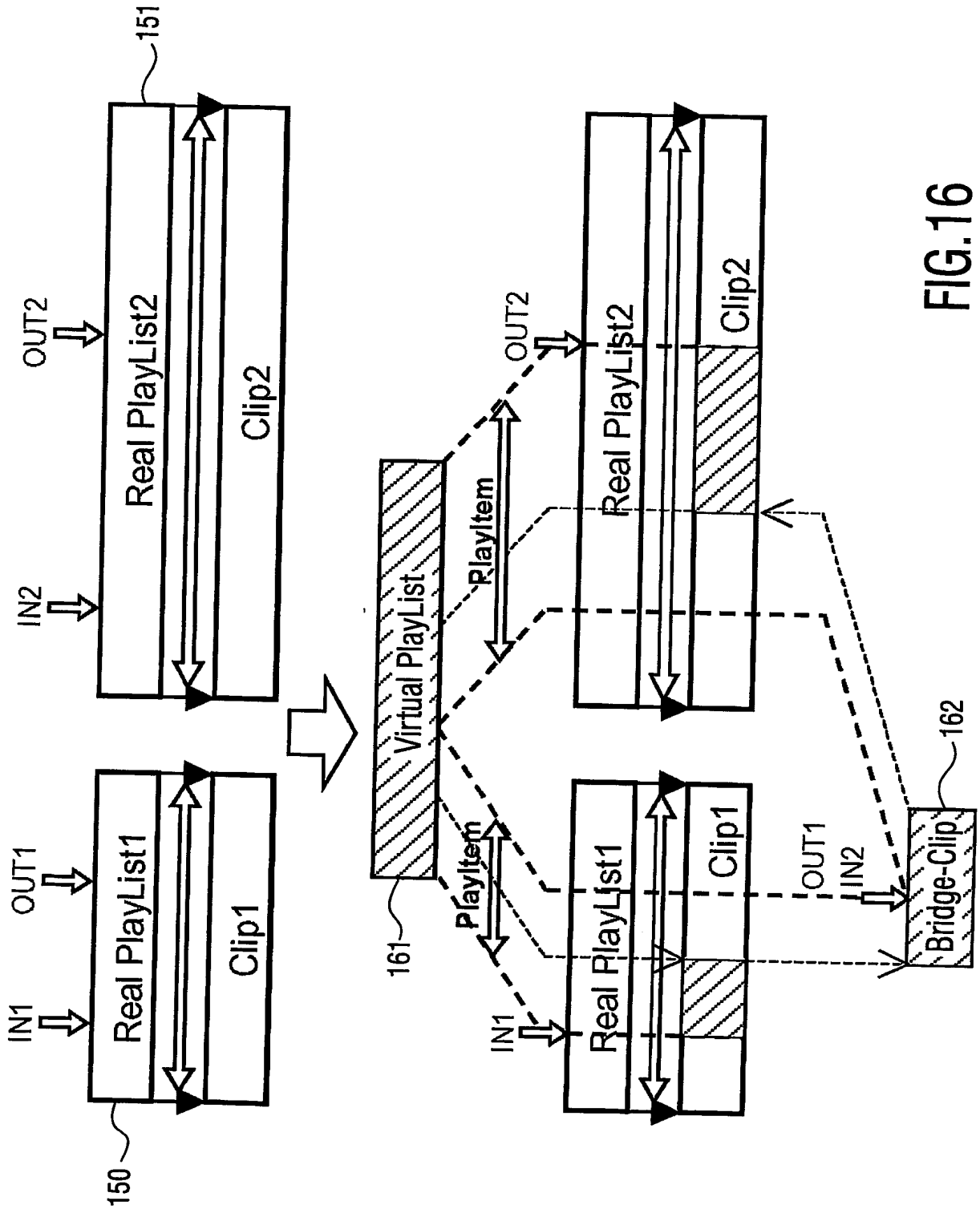

151
OUT2
IN2
Real PlayList2
Clip2
OUT1
IN1
Real PlayList1
Clip1
150
Virtual PlayList
PlayItem
PlayItem
161
OUT2
Real PlayList2
Clip2
IN1
Real PlayList1
Clip1
OUT1
IN2
Bridge-Clip
162

FIG.16

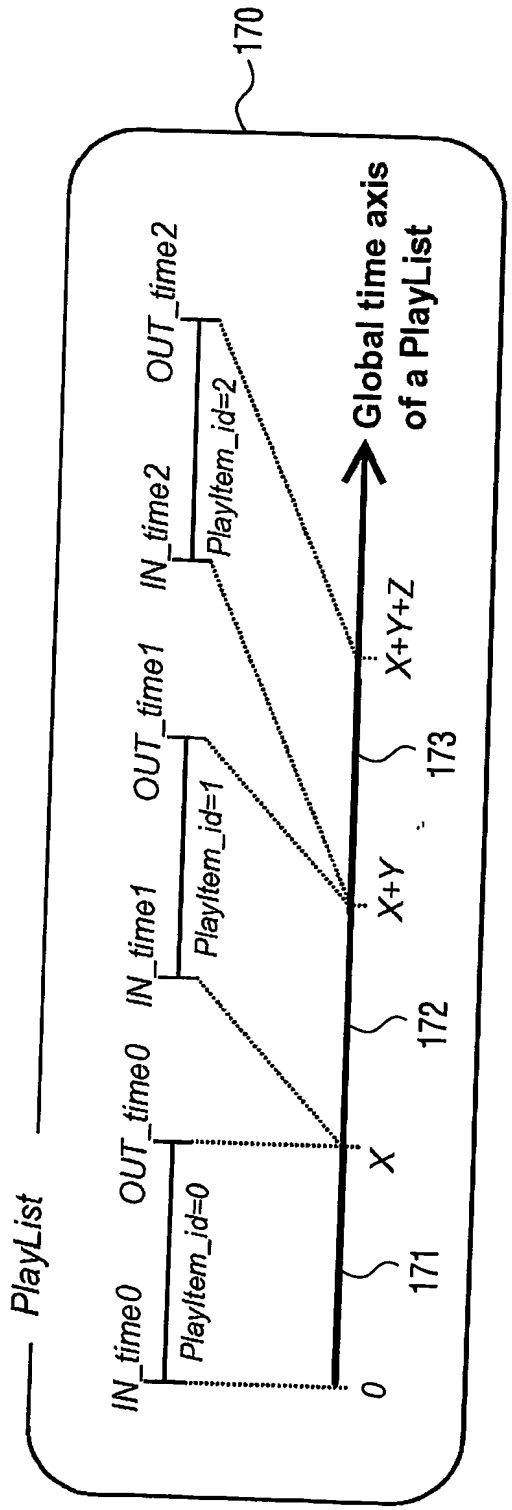

170
PlayList
IN_time0
OUT_time0
PlayItem_id=0
IN_time1
OUT_time1
PlayItem_id=1
IN_time2
OUT_time2
PlayItem_id=2
Global time axis
of a PlayList
0
X
X+Y
X+Y+Z
171
172
173

FIG.17

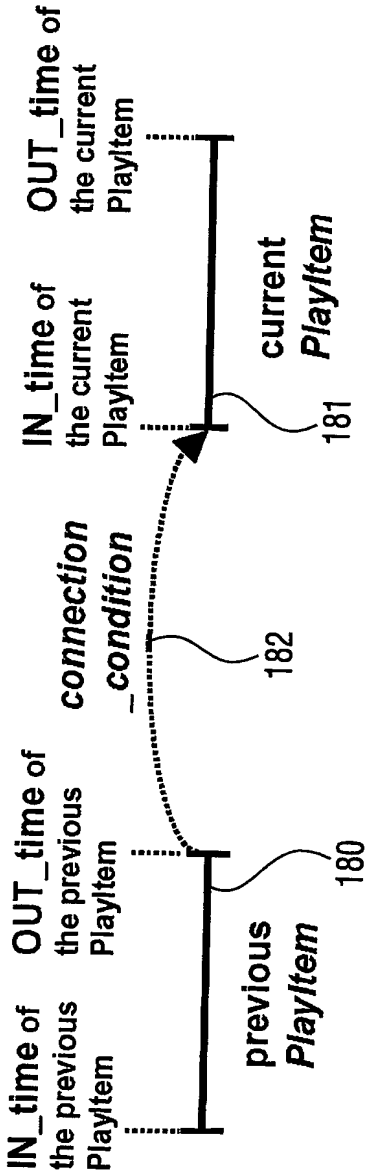
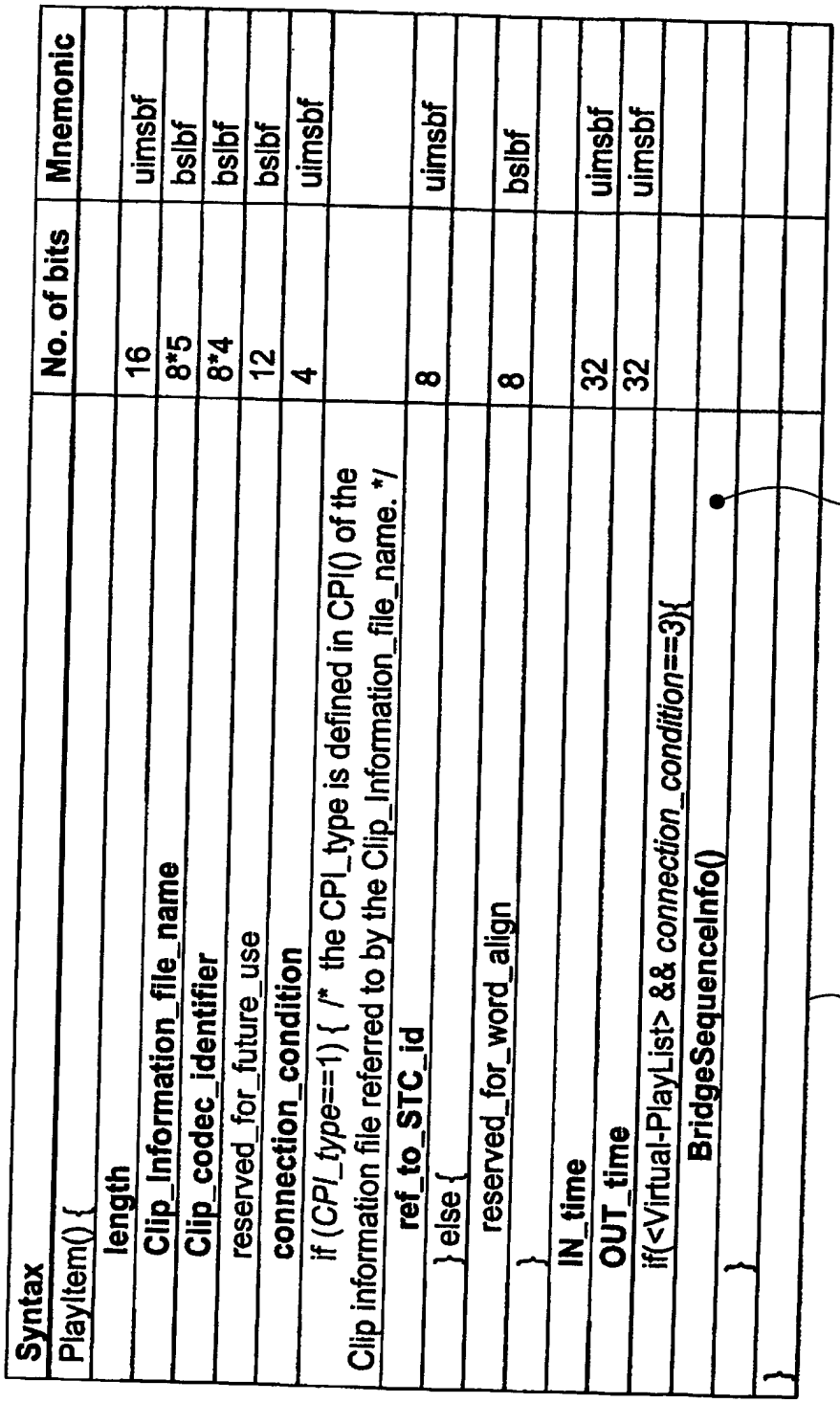

IN_time of the previous PlayItem
OUT_time of the previous PlayItem
previous PlayItem
180
connection _condition
182
IN_time of the current PlayItem
OUT_time of the current PlayItem
current PlayItem
181

FIG.18



Syntax	No. of bits	Mnemonic
PlayItem() {		
length	16	uimsbf
Clip_Information_file_name	8*5	bslbf
Clip_codec_identifier	8*4	bslbf
reserved_for_future_use	12	bslbf
connection_condition	4	uimsbf
if (*CPI_type*==1) { /* the CPI_type is defined in CPI() of the Clip information file referred to by the Clip_Information_file_name. */		
ref_to_STC_id	8	uimsbf
} else {		
reserved_for_word_align	8	bslbf
}		
IN_time	32	uimsbf
OUT_time	32	uimsbf
if(<Virtual-PlayList> && *connection_condition*==3){		
BridgeSequenceInfo()		
}		
}		

190

191

FIG.19

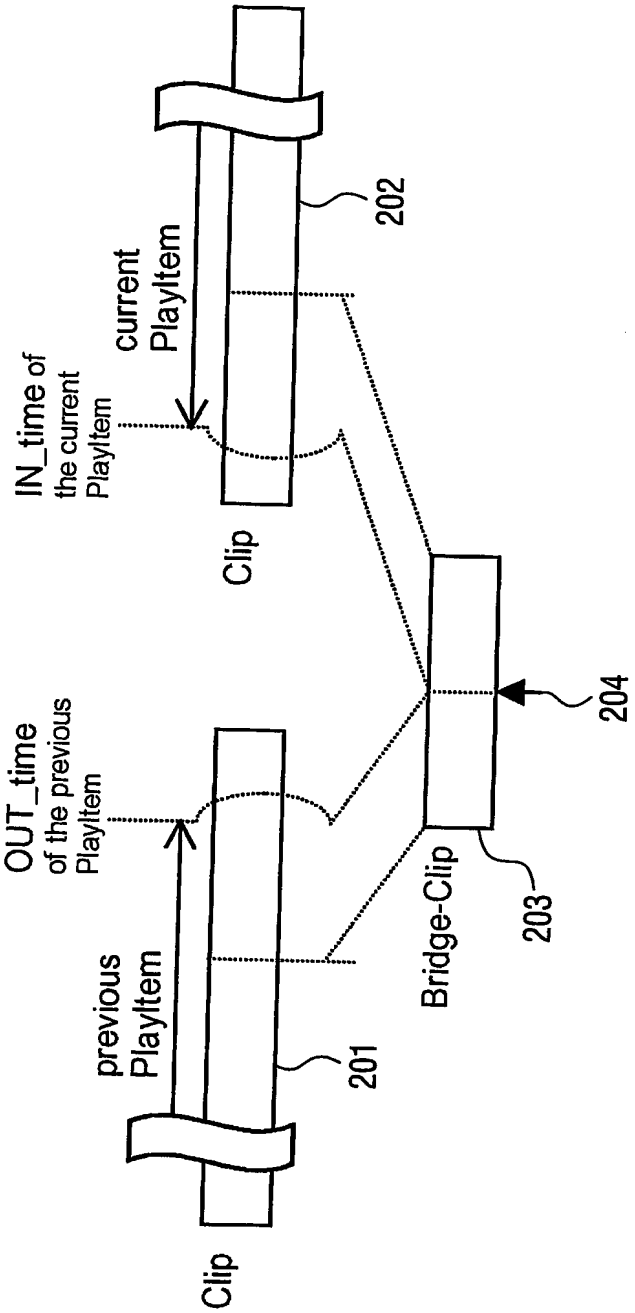

current PlayItem
202
IN_time of the current PlayItem
Clip
OUT_time of the previous PlayItem
previous PlayItem
201
Clip
Bridge-Clip
203
204

FIG.20

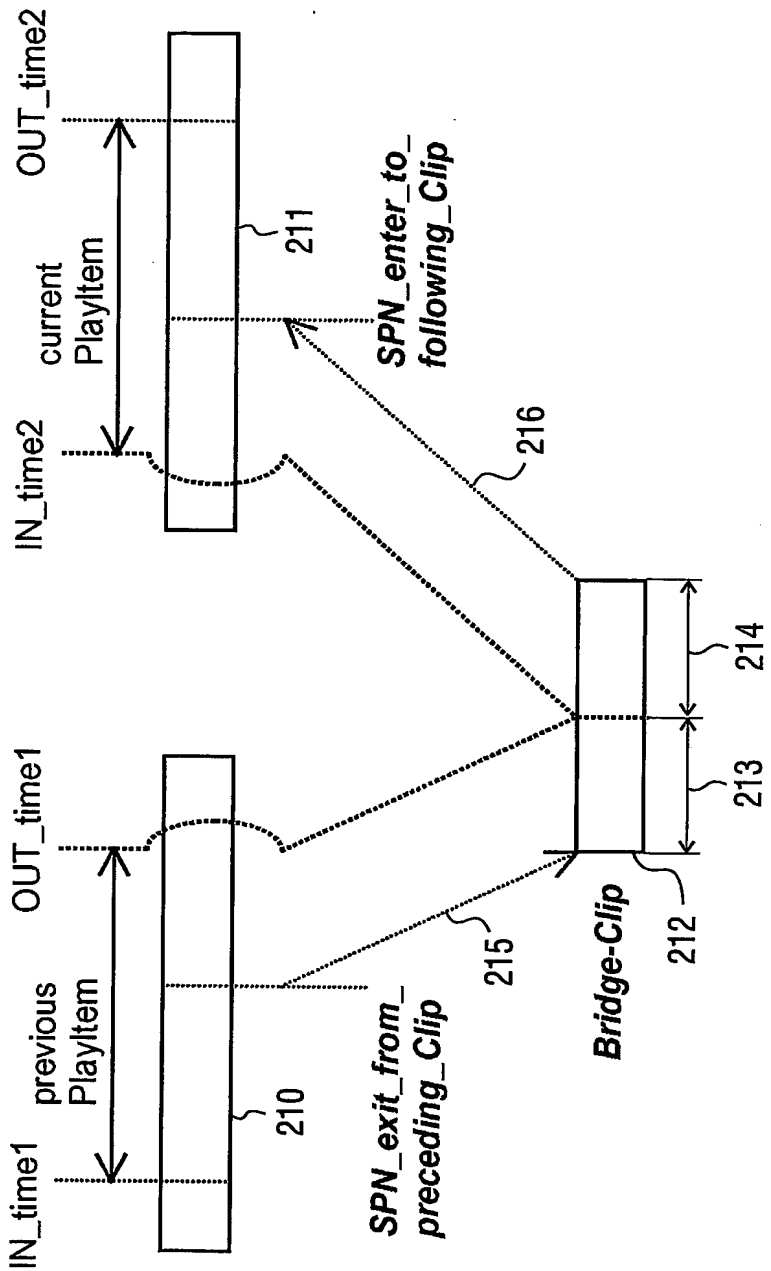

OUT_time2
current PlayItem
IN_time2
211
SPN_enter_to_following_Clip
216
214
213
OUT_time1
previous PlayItem
IN_time1
210
SPN_exit_from_preceding_Clip
215
Bridge-Clip
212

FIG.21

Syntax	No. of bits	Mnemonic
BridgeSequenceInfo() {		
Bridge_Clip_Information_file_name	8*5	bslbf
Clip_codec_identifier	8*4	bslbf
reserved_for_future_use	8	bslbf
}		

FIG.22

Syntax	No. of bits	Mnemonic
zzzzz.clpi {		
type_indicator	8*4	bslbf
version_number	8*4	bslbf
SequenceInfo_start_address	32	uimsbf
ProgramInfo_start_address	32	uimsbf
CPI_start_address	32	uimsbf
ClipMark_start_address	32	uimsbf
MakersPrivateData_start_address	32	uimsbf
reserved_for_future_use	96	bslbf
ClipInfo()		
for(i=0; i<N1; i++){		
padding_word	16	bslbf
}		
SequenceInfo()		
for(i=0; i<N2; i++){		
padding_word	16	bslbf
}		
ProgramInfo()		
for(i=0; i<N3; i++){		
padding_word	16	bslbf
}		
CPI()		
for(i=0; i<N4; i++){		
padding_word	16	bslbf
}		
ClipMark()		
for(i=0; i<N5; i++){		
padding_word	16	bslbf
}		
MakersPrivateData()		
for(i=0; i<N6; i++){		
padding_word	16	bslbf
}		
}		

FIG.23

Syntax	No. of bits	Mnemonic
ClipInfo() {		
length	32	uimsbf
reserved_for_future_use	16	bslbf
Clip_stream_type	8	uimsbf
reserved_for_word_align	4	bslbf
encode_condition	2	bslbf
transcode_mode_flag	1	bslbf
controlled_time_flag	1	bslbf
TS_average_rate	32	uimsbf
TS_recording_rate	32	uimsbf
num_of_source_packets	32	uimsbf
BD_system_use	1024	bslbf
TS_type_info_block()		
if (Clip_stream_type == 2) {		
preceding_Clip_Information_file_name	8*5	bslbf
Clip_codec_identifier	8*4	bslbf
reserved_for_future_use	8	bslbf
SPN_exit_from_preceding_Clip	32	uimsbf
following_Clip_Information_file_name	8*5	bslbf
Clip_codec_identifier	8*4	bslbf
reserved_for_future_use	8	bslbf
SPN_enter_to_following_Clip	32	uimsbf
}		
}		

FIG.24

Syntax	No. of bits	Mnemonic
SequenceInfo() {		
length	32	uimsbf
reserved_for_word_align	8	bslbf
num_of_ATC_sequences	8	uimsbf
for (atc_id=0; atc_id<num_of_ATC_sequences; atc_id++) {		
SPN_ATC_start[atc_id]	32	uimsbf
num_of_STC_sequences[atc_id]	8	uimsbf
offset_STC_id[atc_id]	8	uimsbf
for (stc_id = offset_STC_id[atc_id]; stc_id <(num_of_STC_sequences[atc_id]+offset_STC_id[atc_id]); stc_id++) {		
PCR_PID[atc_id][stc_id]	16	uimsbf
SPN_STC_start[atc_id][stc_id]	32	uimsbf
presentation_start_time[atc_id][stc_id]	32	uimsbf
presentation_end_time[atc_id][stc_id]	32	uimsbf
}		
}		
}		

FIG.25

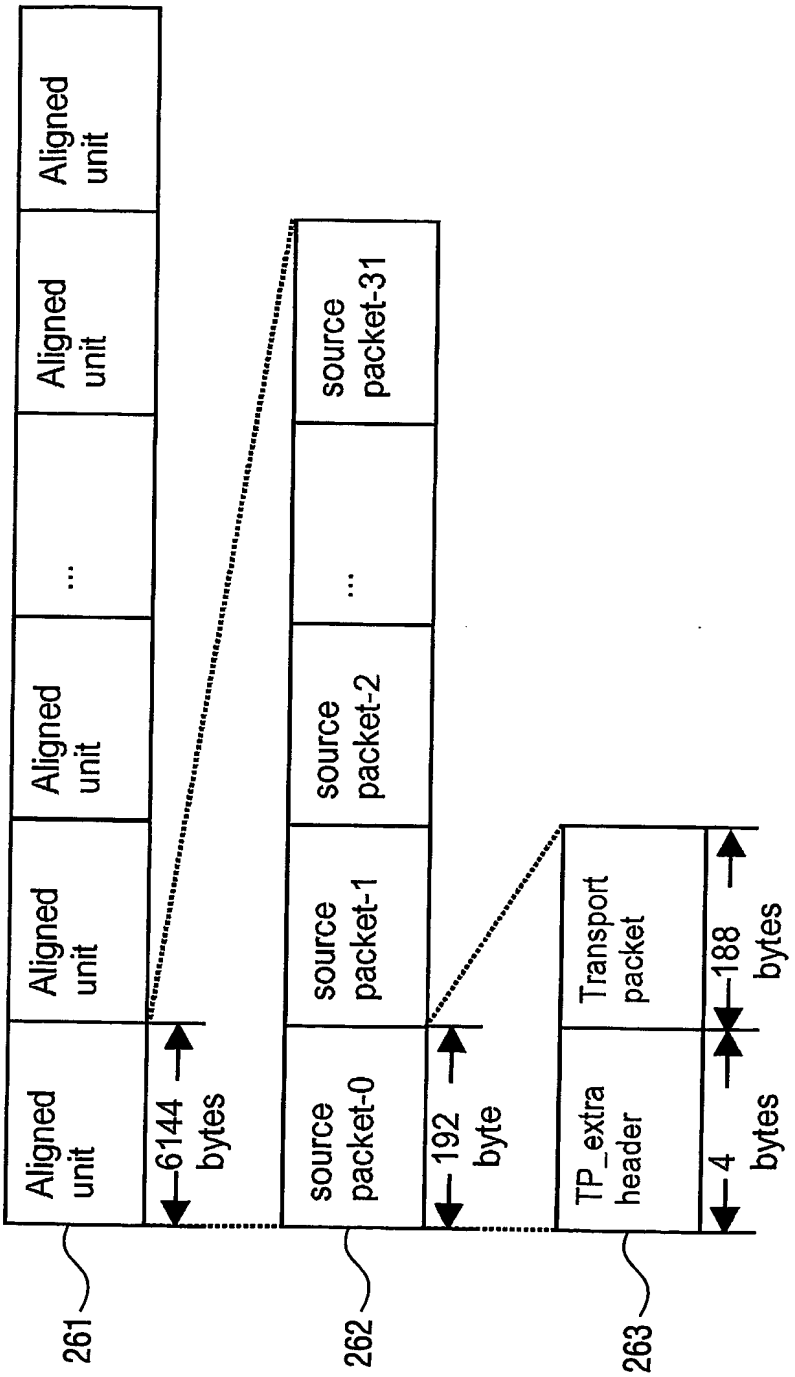

Aligned unit
Aligned unit
Aligned unit
...
Aligned unit
Aligned unit
6144 bytes
source packet-0
source packet-1
source packet-2
...
source packet-31
192 byte
TP_extra header
Transport packet
4 bytes
188 bytes
261
262
263

FIG.26

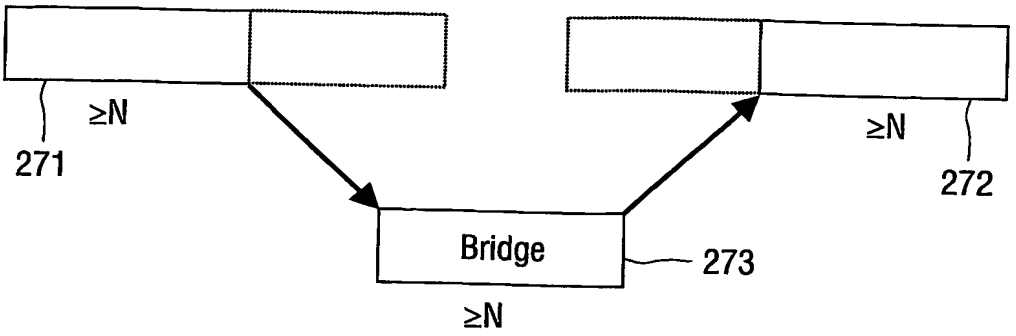


FIG.27

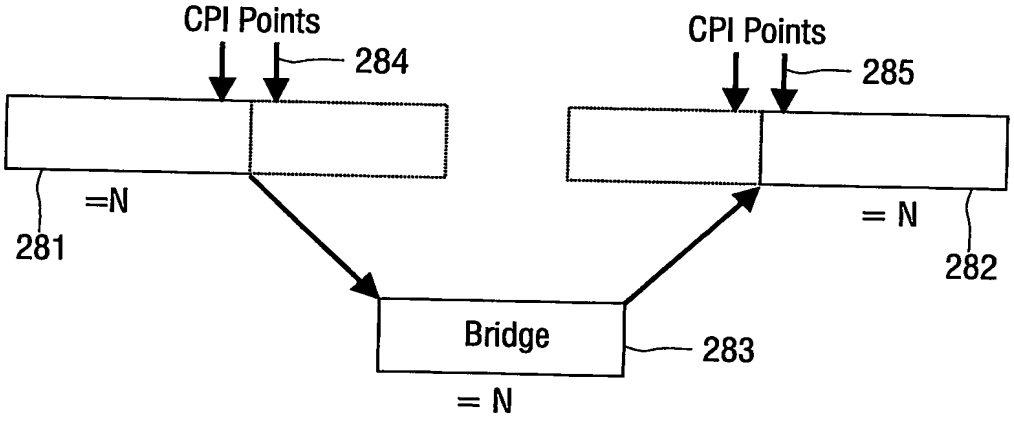


FIG.28

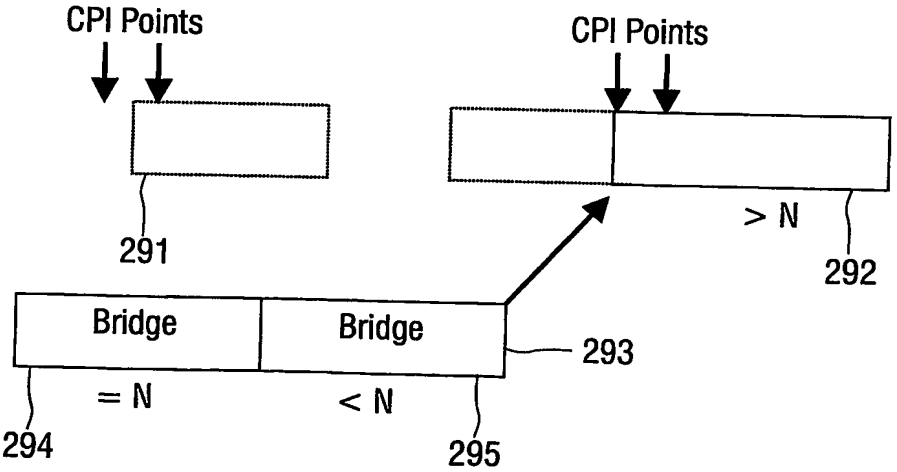


FIG.29

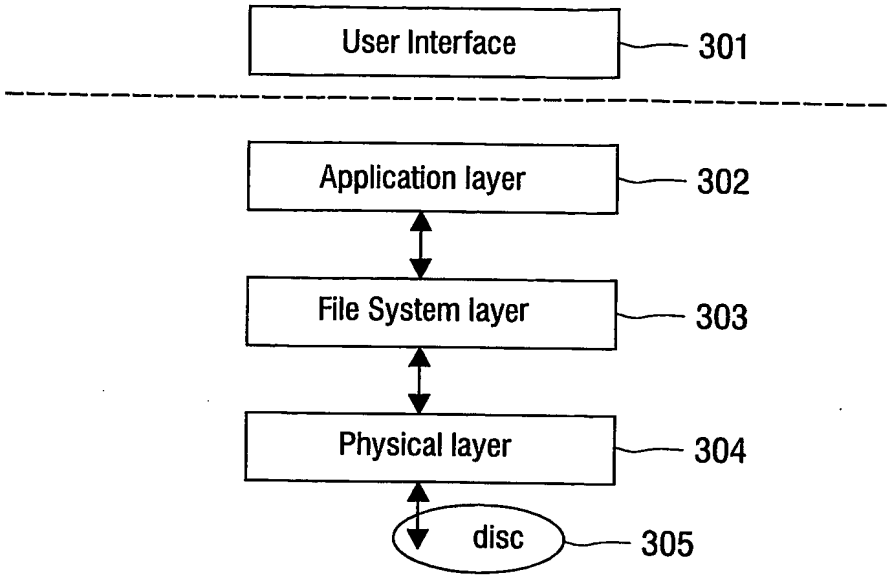

User Interface
301
Application layer
302
File System layer
303
Physical layer
304
disc
305

FIG.30

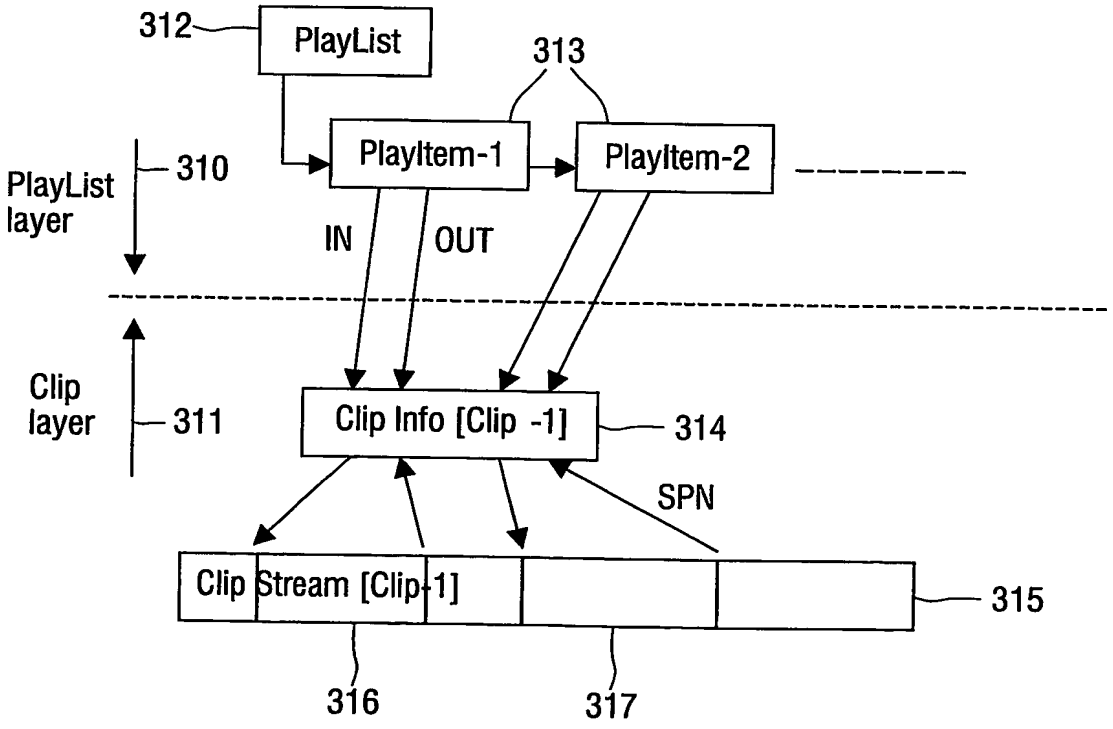

312
PlayList
313
PlayItem-1
PlayItem-2
PlayList layer
310
IN
OUT
Clip layer
311
Clip Info [Clip -1]
314
SPN
Clip Stream [Clip-1]
315
316
317

FIG.31

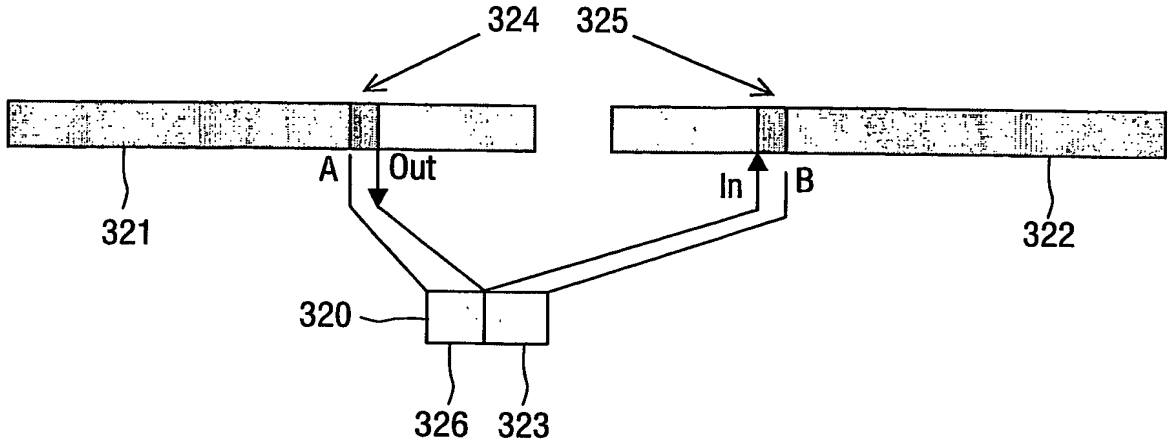

324
325
A
Out
In
B
321
322
320
326
323

FIG.32

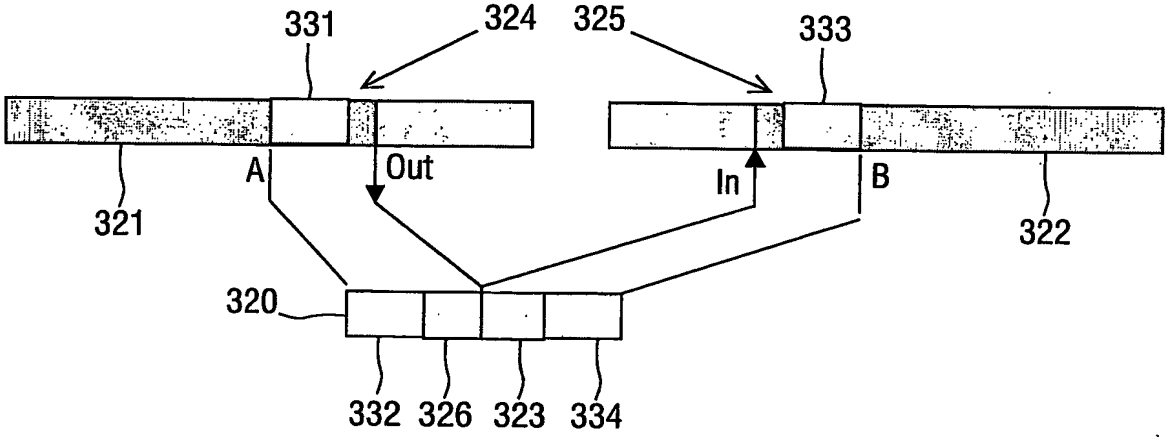

331
324
325
333
A
Out
In
B
321
322
320
332
326
323
334

FIG.33

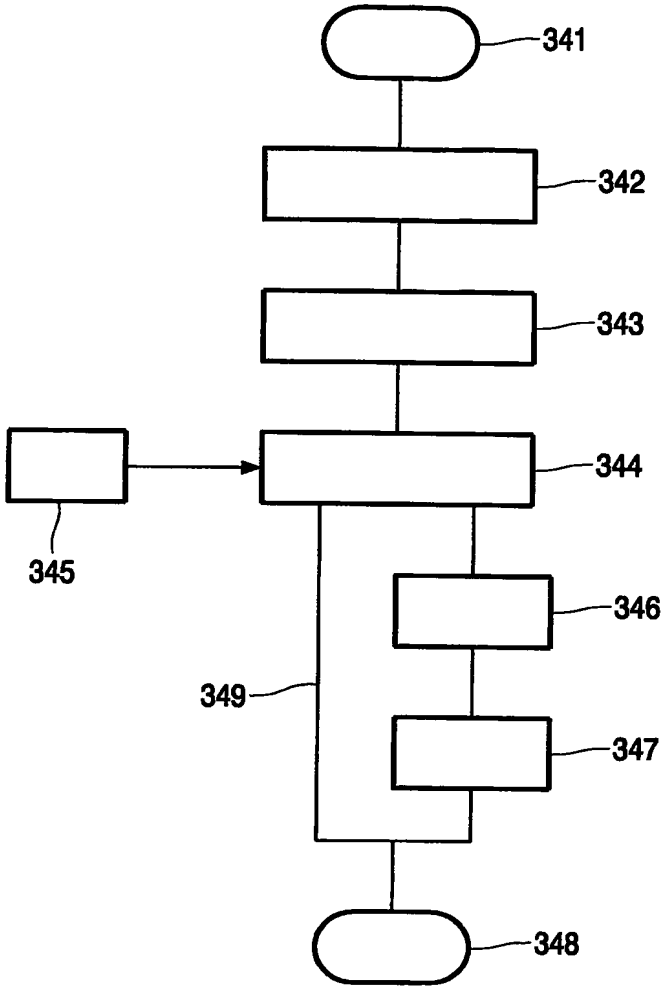


FIG. 34

This Page is Inserted by IFW Indexing and Scanning Operations and is not part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☐ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.
As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.